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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,331

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Reid C. Danielson

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FAEGRE & BENSON LLP  
PATENT DOCKETING  
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MINNEAPOLIS, MN 55402

EXAMINER

WATKO, JULIE ANNE

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/698,331

Applicant(s)

DANIELSON ET AL.

Examiner

Julie Anne Watko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 4-7, 14-21 and 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-13 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 11-12 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sony (JP 11-66766 A).

Regarding the limitation “for supporting a head slider over a disk surface in a rigid disk drive”: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

As recited in claim 1, Sony shows a head suspension (see Fig. 9), the head suspension including a load beam having a mounting region (81b, rightward in Fig. 9), a rigid region (81c, leftward in Fig. 9) and a spring region (see 81a) located between the mounting region and rigid region the head suspension comprising a shock limiter 31 integrally formed solely of the material of the spring region of the load beam (see Fig. 8) and without additional mass added to the load beam, the shock limiter limiting movement of the head suspension away from the disk surface due to impact loading.

As recited in claim 11, Sony shows a load beam 81 comprising a single piece of material (see Fig. 8) including: a mounting region 81b; a rigid region 81c; a spring region 81a located between the mounting and rigid regions; and a shock limiter 31 formed solely of the material of the spring region and without additional mass added to the load beam and wherein the shock

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limiter is adapted to contact a portion 81c of the head suspension upon movement of the head suspension relative to the disk surface due to impact loading.

As recited in claim 12, Sony shows that the shock limiter 31 limits movement of the rigid region 81c of the load beam away from the disk surface due to impact loading.

As recited in claim 22, Sony shows a head suspension (see Fig. 9) including a load beam (see Fig. 8) having a mounting region 81b, a rigid region 81c and a spring region 81a located between the mounting region and rigid region, the head suspension comprising a shock limiter 31 integrally formed solely of the same piece of material as the spring region of the load beam (see Fig. 8) and without additional mass added to the load beam, the shock limiter 31 including at least one bend (see 33) creating an overlap with a portion 81c of the head suspension to limit movement of the head suspension away from the surface of the disk.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-3, 8-13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berding (US Pat. No. 5936803).

Regarding the limitation “for supporting a head slider over a disk surface in a rigid disk drive”: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

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Regarding the limitation “integrally formed”: The product by process limitations in these claims are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As recited in claim 1, Berding shows a head suspension (see Figs. 3-4) including a load beam 120 having a mounting region (right region in Fig. 4), a rigid region (left region in Fig. 4) and a spring region 122 located between the mounting region and the rigid region, the head suspension comprising a shock limiter (including 166) integrally formed solely of the material (“stainless steel”, see col. 6, line 52-col. 7, line 3) of the spring region of the load beam, the shock limiter limiting movement of the head suspension away from the disk surface (see col. 6, lines 63-67) due to impact loading.

As recited in claim 1, Berding is silent regarding the shock limiter being integrally formed without additional mass added to the load beam; however, there is no invention in forming two known rigidly attached pieces as a single piece, absent evidence of unexpected

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results in combination with evidence that the integration or unification requires greater than ordinary skill in the art. In re Fridolph, 135 USPQ 319, 322 (CCPA 1962).

Furthermore, the term “integral” has been held to include constituent parts so combined as to constitute a unitary whole. Although “integral” is not limited to fabrication of parts from a single piece of metal, the use of one-piece construction is obvious, and not patentable over a reference showing several parts joined so as to be integral. See In re Larson, 144 USPQ 347 (CCPA 1965).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrally form the two rigidly attached steel pieces of Berding instead of adding mass by separately forming the pieces and attaching them. The rationale is as follows: one of ordinary skill in the art would have been motivated to simplify assembly by avoiding a welding step as is notoriously well known in the art.

As recited in independent claim 11, in addition to the above teachings, Berding shows the load beam 120 comprising a single piece of material (“thin sheet of stainless steel”, see col. 7, lines 1-3).

As recited in claim 3 and independent claim 11, Berding shows that the shock limiter overlaps a portion of the head suspension and the shock limiter contacts the overlapped portion 110 of the head suspension upon movement of the head suspension away from the disk surface due to impact loading.

As recited in claims 8, 10 and independent claim 22, in addition to the above teachings, Berding shows the shock limiter including at least one bend creating an overlap (see 166 in Fig. 4) with a portion 110 of the head suspension.

As recited in claims 2 and 13, Berding shows that the spring region of the load beam includes an opening 116, and wherein the shock limiter comprises a cantilevered portion 165 formed within the opening.

As recited in claim 9, Berding shows that the head suspension includes a base plate 110 attached to the load beam at the mounting region, and the overlapped portion of the head suspension comprises a portion of the base plate such that the base plate is contacted directly by the shock limiter ("balancing member 160 may optionally include tabs or "limiters" 166 that contact the base plate 110 and mechanically limit the movement of the load beam 120 in a direction away from the disk 12", see col. 6, lines 63-67) when the shock limiter is limiting movement of the head suspension away from the disk surface due to impact loading.

As recited in claim 12, Berding shows that the shock limiter limits movement of the rigid region of the lead beam away from the disk surface ("mechanically limit the movement of the load beam 120 in a direction away from the disk 12", see col. 6, lines 63-67) due to impact loading.

### ***Response to Arguments***

5. Applicant's arguments filed January 17, 2006, have been fully considered but they are not persuasive.

On page 8, 3<sup>rd</sup> paragraph, Applicant argues that "Fig. 9 and the specification of the Sony reference show or describe a shock limiter (jumping prevention member 31) formed as a discrete or separate component that is attached or fixed to a mounting region 81b of a load beam 81. See Fig. 9." The Examiner has considered this argument thoroughly and notes that jumping prevention member 31 of Sony Fig. 9 is not formed as a discrete or separate component that is

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attached or fixed to a mounting region 81b of a load beam 81. Sony shows a single piece of material (see Fig. 8) which is bent along 33 so that shock limiters 31b overlap a rigid region 81c of the load beam. Because the load beam, spring region and shock limiters are all formed from a single piece of stainless steel, the shock limiter is clearly formed of the same piece of material as the spring region.

The following quotation is taken from a machine translation of Sony (JP 11-066766) from the Japan Patent Office website (<http://www4.ipdl.ncipi.go.jp/Tokujitu/PAJdetail.ipdl?N0000=60&N0120=01&N2001=2&N3001=H11-066766>).

[0023] "The 4th operation gestalt of HGA" next drawing 8, and drawing 9 show the 4th operation gestalt of HGA. In this case As press working of sheet metal of the jumping prevention member 31 of a Uichi Hidari pair is carried out to end face 81b of the load beam 81 of a suspension 8 at one and it is shown in drawing 8 The jumping prevention member 31 of a Uichi Hidari pair which carried out press working of sheet metal to the right-and-left both sides of end face 81b of the load beam 81 is turned up by press working of sheet metal on end face side 81b in bend line 33 part of a Uichi Hidari pair. and -- in this case -- the 1- in the load beam 81 shown with the 3rd operation gestalt, since the clearance precision between the jumping prevention member 31 of a right-and-left pair and tip side 81c of the load beam 81 can be raised further unlike the thing using the jumping prevention member 31 which consists of another components, the variation between the components of the jumping initiation acceleration of a flying head 9 decreases, and dependability improves further.

It is clear from this machine translation of ¶ 0023 that the structure shown in Sony Fig. 9 is formed via press working the sheet metal structure shown in Sony Fig. 8 to turn up the sheet metal along bend line 33. Although Applicant alleges that the shock limiter of Sony is "attached or fixed to a mounting region 81b", The Examiner notes that the shock limiter of Sony is attached or fixed to the mounting region only insofar as it is integrally formed via one-piece



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construction with the mounting region, out of the same piece of material as the entire load beam including the spring region. Thus, Sony anticipates claims 1, 11-12 and 22.

On page 9, Applicant argues that “regardless whether the Berding balancing feature 160 is unified with the load beam or attached thereto, the balancing feature 160, including the balancing mass 164 and tabs 166 is an additional mass added to the load beam, for the sole purpose of mass balancing the HGA.” The Examiner has considered this argument thoroughly and agrees that Berding discloses mass added to the load beam; however, the use of one-piece construction is obvious, and not patentable in view of a prior art reference disclosing attachment of plural pieces into a unitary whole. See *In re Larson*, 144 USPQ 347 (CCPA 1965).

Furthermore, there is no invention in forming two known rigidly attached pieces as a single piece, absent evidence of unexpected results in combination with evidence that the integration or unification requires greater than ordinary skill in the art. *In re Fridolph*, 135 USPQ 319, 322 (CCPA 1962).

Applicant has failed to show evidence of unexpected results due to integral formation. Applicant has failed to show that integral formation would have been beyond the level of ordinary skill in the art. Thus, Applicant has failed to patentably distinguish the claims from the Berding reference.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

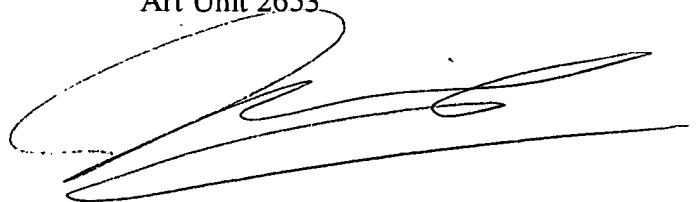
7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597. The examiner can normally be reached on T11A-5PW3P-9PTh11:30A-10PF10A-8:30PSatNoon-8:30P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko  
Primary Examiner  
Art Unit 2653

January 21, 2006  
JAW

A handwritten signature in black ink, appearing to read 'Julie Anne Watko', is written over the printed name and title.